

REMARKS

Election Restriction Requirement

The Examiner has indicated new submitted claims 42-46 are directed to an invention that is independent distinct from the invention originally claimed because the previously presented claims require spinning the wafer which is not required by the newly presented claims. Applicant respectfully disagrees. Newly submitted claims 42-46 contain the limitations of "after applying said vapor or liquid dispensing rinse water onto said spinning wafer". As such, claims 42-46 do require a spinning wafer. Applicant has amended claims 42-46 to more particularly point out and distinctly claim that the wafer is spinning during processing. As such, Applicant respectfully request consideration of new claims 42-46. Additionally, Applicant has amended claim 36 to change the dependency from canceled claim 35 to claim 32.

Claim Rejection 35 U.S.C. §§ 102/103

The Examiner has rejected claims 32, 34, 37, 40 and 41 under 35 U.S.C. § 102(b) as being anticipated by EP 0905747. The Examiner has rejected claims 32, 34, 37, 40 and 41 under 35 U.S.C. § 102(e) as being anticipated by Mertens et al. (US Patent 6,491,764). The Examiner has rejected claims 38 and 39 under 35 U.S.C. § 103(a) as being unpatentable over any one of Mertens et al. or EP 0905747 in view of Chang et al (US Patent 6,273,099).

It is Applicant's understanding neither EP 0905747 nor Mertens et al. (US Patent 6,491,764) teach Applicant's invention as claimed in claims 32, 34, and 36-41 as well as new claims 42-46. In claims 32, 34, 36-41 and new claims 42-46, Applicant teaches and claims a method of cleaning a wafer comprising spinning a wafer and exposing the spinning wafer to an etchant or cleaning chemicals and after exposing the wafer to an etchant or cleaning chemicals, exposing the spinning wafer to a liquid or vapor having a lower surface tension than water and after exposing said wafer to said low surface tension liquid or vapor, rinsing said wafer with DI water. That is, it is Applicants understanding that EP 0905747 and Mertens et al. both fail to teach Applicant's specific series or steps for cleaning a wafer and namely rinsing the wafer with DI water, after exposing the wafer to a liquid or vapor having a lower surface tension than water.

It is Applicants understanding that both EP 0905747 and Mertens et al. disclose exposing the wafer to cleaning chemicals or rinsing solutions and simultaneously to or shortly thereafter, exposing the wafer to a liquid or vapor having a surface tension lower in that of the cleaning or rinsing solution. It is Applicants understanding that EP 0905747 and Mertens et al. teach to dry the wafer after exposing the wafer the low surface tension liquid or vapor. For example, EP 0905747 states that "*The resulting surface tension reduction of said liquid facilitates the movement of said liquid towards the edge of the substrate. The surface left behind is cleaned and dried.*" (Col. 3, lines 54-57) Accordingly, Mertens et al. and EP 0905747 describe drying the wafer after exposing the wafer to the low surface tension liquid or vapor and not rinsing the wafer as claimed by Applicant. As such, it is Applicants understanding that the cited references fail to teach Applicant's invention as claimed.

Additionally, with respect to claims 34, 36, 40 and new claims 43 and 46, Applicant teaches and claims applying megasonics energy to the wafer while cleaning and/or rinsing the wafer. Applicant understands Mertens et al. to apply megasonics energy to the cleaning or rinsing solution via a nozzle and not to apply megasonics energy to the wafer as claimed by Applicant. Accordingly, claims 34, 36, 40 and new claims 43 and 46 are not taught by Mertens et al. for this reason also.

As such, Applicant respectfully request the removal of the 35 U.S.C. § 102 and 103 rejections of claims 32, 34, 37, 40, 41 and new claims 42-46 and seeks an early allowance of these claims.